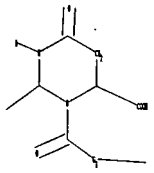
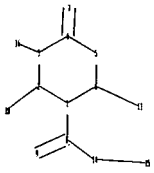
=>
Uploading C:\Program Files\Stnexp\Queries\10715331.str





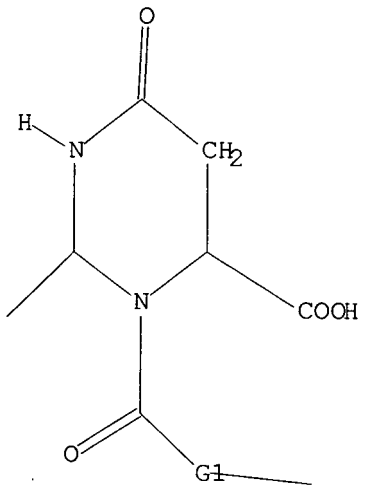
chain nodes :
7 8 9 11 14 16
ring nodes :
1 2 3 4 5 6
ring/chain nodes :
10 15
chain bonds :
1-8 2-10 3-16 4-7 6-11 8-9 8-14 14-15
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6
exact/norm bonds :
1-2 1-6 1-8 2-3 3-4 4-5 4-7 5-6 8-9 8-14 14-15
exact bonds :
2-10 3-16 6-11
isolated ring systems :
containing 1 :

G1:O,CH2

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS
11:CLASS 14:CLASS 15:CLASS 16:CLASS

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



G1 O,CH2

Structure attributes must be viewed using STN Express query preparation.

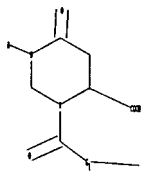
=> s l1 sss sam
SAMPLE SEARCH INITIATED 20:05:33 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 9 TO ITERATE

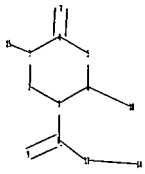
100.0% PROCESSED 9 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 9 TO 360
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=>
Uploading C:\Program Files\Stnexp\Queries\10715331 (a).str





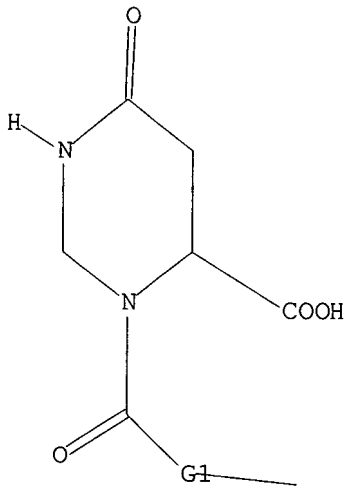
chain nodes :
7 8 9 10 13 15
ring nodes :
1 2 3 4 5 6
ring/chain nodes :
14
chain bonds :
1-8 3-15 4-7 6-10 8-9 8-13 13-14
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6
exact/norm bonds :
1-2 1-6 1-8 2-3 3-4 4-5 4-7 5-6 8-9 8-13 13-14
exact bonds :
3-15 6-10
isolated ring systems :
containing 1 :

G1:O,CH2

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS
13:CLASS 14:CLASS 15:CLASS

L3 STRUCTURE UPLOADED

=> d l3
L3 HAS NO ANSWERS
L3 STR



G1 O,CH2

Structure attributes must be viewed using STN Express query preparation.

=> s l3 sss sam
SAMPLE SEARCH INITIATED 20:06:49 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 9 TO ITERATE

100.0% PROCESSED 9 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 9 TO 360
PROJECTED ANSWERS: 0 TO 0

L4 0 SEA SSS SAM L3

=> s l3 sss ful
FULL SEARCH INITIATED 20:07:00 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 190 TO ITERATE

100.0% PROCESSED 190 ITERATIONS 15 ANSWERS
SEARCH TIME: 00.00.01

L5 15 SEA SSS FUL L3

=> => d his

(FILE 'HOME' ENTERED AT 20:04:56 ON 21 JUN 2007)

```
     FILE 'REGISTRY' ENTERED AT 20:05:04 ON 21 JUN 2007
L1                STRUCTURE UPLOADED
L2              0 S L1 SSS SAM
L3                STRUCTURE UPLOADED
L4              0 S L3 SSS SAM
L5             15 S L3 SSS FUL

     FILE 'CAPLUS' ENTERED AT 20:07:07 ON 21 JUN 2007

=> s l5
L6            11 L5

=> d l6 1-11 bib,ab,hitstr
```

L6 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:802605 CAPLUS
DN 141:314624
TI Compositions and methods related to fatty amino acid derivatives
IN Lakner, Frederick J.; Negrete, George R.
PA Board of Regents, the University of Texas System, USA
SO U.S. Pat. Appl. Publ., 13 pp.
CODEN: USXXCO
DT Patent
LA English

Appl.

FAN.CNT 1

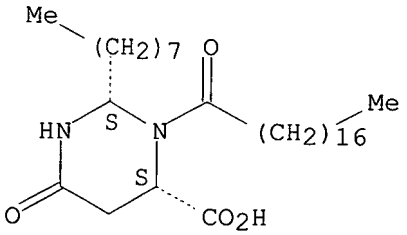
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004192894	A1	20040930	US 2003-715331	20031117
PRAI US 2002-426686P	P	20021115		

OS CASREACT 141:314624; MARPAT 141:314624

AB The present invention concerns the use of methods and/or compns. related to the synthesis and use of fatty asparagine, cysteine and/or serine derivs. I [R1, R2 = (un)branched, (un)saturated hydrocarbon, cholesterol, steroid, aromatic; X = O, CH2], II and III, resp., or their carboxylate salts. In particular, the invention concerns methods and compns. for the production of liposomes including fatty asparagine, cysteine and/or serine derivs.

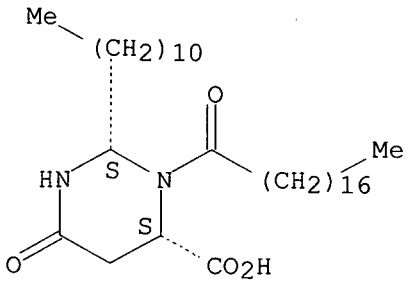
IT 765301-17-5P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(compns. and methods related to fatty amino acid derivs.)
RN 765301-17-5 CAPLUS
CN 4-Pyrimidinecarboxylic acid, hexahydro-2-octyl-6-oxo-3-(1-oxooctadecyl)-, (2S,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



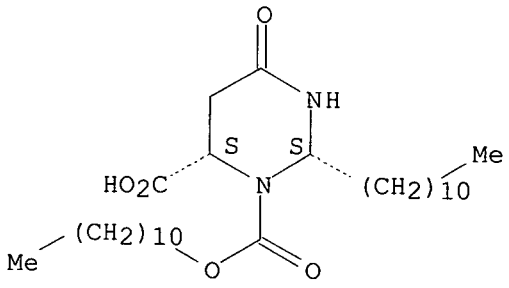
IT 765956-24-9P, (S,S)-3-Octadecanoyl-6-oxo-2-undecylhexahydropyrimidine-4-carboxylic acid
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and liposome formation of; compns. and methods related to fatty amino acid derivs.)
RN 765956-24-9 CAPLUS
CN 4-Pyrimidinecarboxylic acid, hexahydro-6-oxo-3-(1-oxooctadecyl)-2-undecyl-, (2S,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



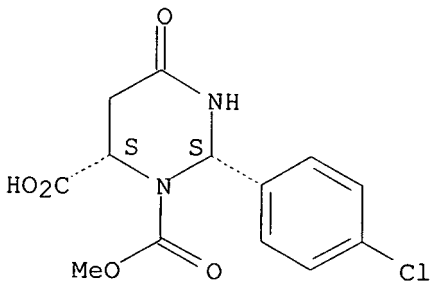
IT 765301-21-1P
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and liposome formation with; compns. and methods related to fatty amino acid derivs.)
RN 765301-21-1 CAPLUS
CN 1,6(2H)-Pyrimidinedicarboxylic acid, tetrahydro-4-oxo-2-undecyl-, 1-undecyl ester, (2S,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



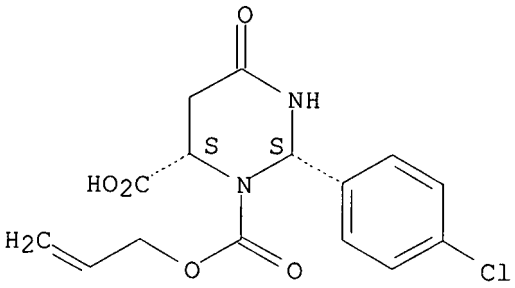
L6 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1999:604219 CAPLUS
DN 131:351625
TI Enantiomerically Pure Tetrahydropyrimidinones in Asymmetric Synthesis: Preparation of a Protected α-Methylasparagine Derivative and Corresponding Dipeptides
AU Hopkins, Stephanie A.; Ritsema, Todd A.; Konopelski, Joseph P.
CS Department of Chemistry and Biochemistry, University of California, Santa Cruz, CA, 95064, USA
SO Journal of Organic Chemistry (1999), 64(21), 7885-7889
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
OS CASREACT 131:351625
AB Me ester (I), available in enantiomerically pure form from the amino acid asparagine via a one-pot cyclization/protection sequence, followed by esterification, can be effectively deprotonated with LDA/DMPU/LiCl. Treatment with MeI affords the corresponding alkylated adduct in enantiomerically pure form, from which α-methylaspartic acid is obtained. Variation of the amine protection group allows for the isolation of a protected carboxylic acid/free amine derivative of α-methylasparagine. The utility of H-MeAsn-OMe is demonstrated in the formation of dipeptides.
IT 250264-83-6P 250264-85-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of in the preparation of a protected α-methylasparagine derivative and corresponding dipeptides from enantiomerically pure tetrahydropyrimidinones)
RN 250264-83-6 CAPLUS
CN 1,6(2H)-Pyrimidinedicarboxylic acid, 2-(4-chlorophenyl)tetrahydro-4-oxo-, 1-methyl ester, (2S,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 250264-85-8 CAPLUS
CN 1,6(2H)-Pyrimidinedicarboxylic acid, 2-(4-chlorophenyl)tetrahydro-4-oxo-, 1-(2-propenyl) ester, (2S,6S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

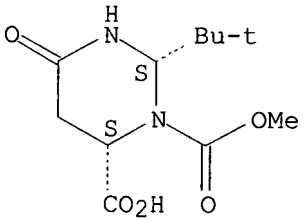


RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1996:72956 CAPLUS
DN 124:233058
TI Synthesis of enantiomerically pure β-amino acids from 2-tert-butyl-1-carbomethoxy-2,3-dihydro-4(1H)-pyrimidinone: (R)-3-amino-3-(p-methoxyphenyl)propionic acid (1(2H)-pyrimidinecarboxylic acid, 2-(1,1-dimethylethyl)-3,4-dihydro-4-oxo-, methyl ester, (R)- or (S)-)
AU Lakner, F. J.; Chu, K. S.; Negrete, G. R.; Konopelski, J. P.
CS Dep. Chem. and Biochem., Univ. California, Santa Cruz, CA, 95064, USA
SO Organic Syntheses (1996), 73, 201-14
CODEN: ORSYAT; ISSN: 0078-6209
PB Wiley
DT Journal
LA English
OS CASREACT 124:233058
AB Cyclocondensation of L-Asn with pivaldehyde, followed by acylation with ClCO2Me, gave tetrahydropyrimidinecarboxylic acid I. Electrochem. oxidative decarboxylation and elimination of I gave dihydropyrimidinone II, which underwent stereoselective palladium-catalyzed addition of 4-MeOC6H4I to give III, which was reduced to the cis-tetrahydropyrimidinone and hydrolyzed with acid to give the title (R)-β-amino acid IV.
IT 138723-45-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(asym. synthesis of β-amino acids from chiral, asparagine-derived dihydropyrimidinones)
RN 138723-45-2 CAPLUS
CN 1,6(2H)-Pyrimidinedicarboxylic acid, 2-(1,1-dimethylethyl)tetrahydro-4-oxo-, 1-methyl ester, (2S-cis)- (9CI) (CA INDEX NAME)

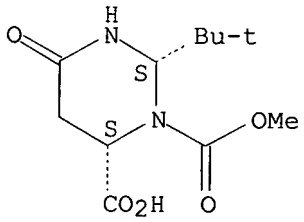
Same as #4

Absolute stereochemistry.



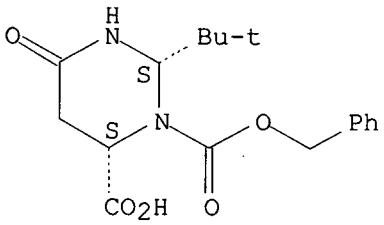
L6 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1992:106718 CAPLUS
DN 116:106718
TI Enantiomerically pure dihydropyrimidinones as reagents and auxiliaries for asymmetric synthesis
AU Chu, Kent S.; Negrete, George R.; Konopelski, Joseph P.; Lakner, Frederick J.; Woo, Nam Tae; Olmstead, Marilyn M.
CS Dep. Chem. Biochem., Univ. California, Santa Cruz, CA, 95064, USA
SO Journal of the American Chemical Society (1992), 114(5), 1800-12
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English
OS CASREACT 116:106718
AB The full exptl. details of the synthesis, structure, and reactivity of (R)- and (S)-2-tert-butyl-1-carbomethoxy-2,3-dihydropyrimidin-4(1H)-one (I) are reported. The synthesis employs asparagine as the starting material and provides I in 55% yield without the need for chromatog. purification The structure of (R)-I, as determined by x-ray crystallog., demonstrates significant pyramidalization at the C4 (carbonyl) and N1 centers, with little evidence of conjugation of N1 with the α,β-unsatd. (vinylogous urea) system. In contrast, 2-tert-butyl-3-[(S)-O-methylmandeloyl]-2,3-dihydropyrimidin-4(1H)-one (II) shows strong coupling of N1 to the α,β-unsatd. system, as evidenced by changes in bond lengths and torsional angles. Compound I has proven useful as a reagent for the synthesis of enantiomerically pure β-aryl-β-amino acids. The key step in this protocol is the palladium-catalyzed conjugate addition of aryl iodides to I. Evidence is presented to support a mechanism for this reaction that involves an unprecedented transannular hydride transfer into the palladium coordination sphere. In addnl. expts., I has been employed as an auxiliary for the synthesis of enantiomerically pure α-substituted carboxylic acids. The crystalline properties of I and many of its derivs. allows for simplified purification procedures to be utilized.
IT 138723-45-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and oxidative decarboxylation of)
RN 138723-45-2 CAPLUS
CN 1,6(2H)-Pyrimidinedicarboxylic acid, 2-(1,1-dimethylethyl)tetrahydro-4-oxo-, 1-methyl ester, (2S-cis)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 138723-44-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and oxidative decarboxylation of, cyclization in)
RN 138723-44-1 CAPLUS
CN 1,6(2H)-Pyrimidinedicarboxylic acid, 2-(1,1-dimethylethyl)tetrahydro-4-oxo-, 1-(phenylmethyl) ester, (2S-cis)- (9CI) (CA INDEX NAME)

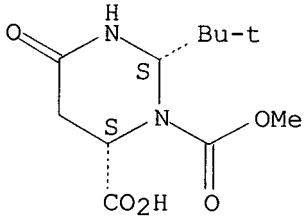
Absolute stereochemistry.



L6 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1991:102828 CAPLUS
DN 114:102828
TI Self-reproduction of chirality. Asymmetric synthesis of β-aryl-β-amino acids from enantiomerically pure dihydropyrimidinones
AU Konopelski, Joseph P.; Chu, Kent S.; Negrete, George R.
CS Dep. Chem., Univ. California, Santa Cruz, CA, 95064, USA
SO Journal of Organic Chemistry (1991), 56(4), 1355-7
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA English
OS CASREACT 114:102828
AB Enantiomerically pure dihydropyrimidinone I can be prepared stereospecifically and in good yield from the amino acid asparagine. Compound I reacts with aryl iodides in the presence of catalytic amts. of Pd(OAc)2 and added phosphine to afford dihydropyrimidinones, e.g. II, in which the aryl group has been added stereospecifically to the β-carbon of the original α,β-unsatd. system. Application of this methodol. to the synthesis of a protected version of the tripeptide portion III (Boc = Me3CO2C) of the natural product jasplakinolide is presented.
IT 131791-84-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and oxidative decarboxylation of, dihydropyrimidinone from)
RN 131791-84-9 CAPLUS
CN 1,6(2H)-Pyrimidinedicarboxylic acid, 2-(1,1-dimethylethyl)tetrahydro-4-oxo-, 1-methyl ester, monopotassium salt, (2S-cis)- (9CI) (CA INDEX NAME)

Same as #4

Absolute stereochemistry.

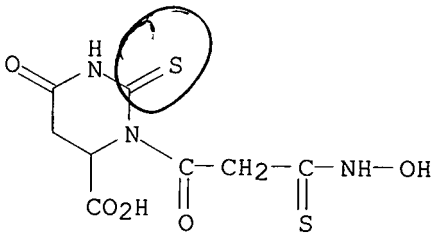


● K

L6 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1984:551870 CAPLUS
DN 101:151870
TI (Hexahydropyrimidyl)thiopropionimidic acid derivatives.
IN Corbiere, Jerome
PA Fr.
SO PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DT Patent
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8401384	A1	19840412	WO 1982-FR158	19820928
	W: JP, US				
	RW: BE, CH, DE, FR, GB, LU, NL				
	EP 119994	A1	19841003	EP 1982-902819	19820928
	R: BE, CH, DE, FR, GB, LI, LU, NL				
PRAI	WO 1982-FR158	A	19820928		

OS MARPAT 101:151870
AB Title compds. I (Z = O, S; R = H, CO2CH2Ph; R1, R2, and R3 are H, alkyl; R4 = H, alkyl, aryl, aralkyl) were prepared as antihypertensives (no data). Thus, nitrile oxide II was treated with H2S and the resulting product was deprotected by BF3 and the saponified to give I (Z = O, R = R1 = R2 = R4 = H, R3 = Me).
IT 84845-22-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 84845-22-7 CAPLUS
CN 4-Pyrimidinecarboxylic acid, hexahydro-3-[3-(hydroxyamino)-1-oxo-3-thioxopropyl]-6-oxo-2-thioxo- (9CI) (CA INDEX NAME)

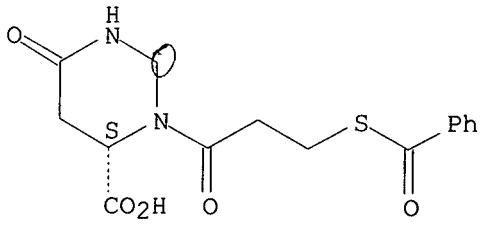


L6 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1983:594996 CAPLUS
DN 99:194996
TI Hexahydro-6-oxo-4S-pyrimidinecarboxylic acids
PA Otsuka Pharmaceutical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58110573	A	19830701	JP 1981-210369	19811225
	JP 61023185	B	19860604		
PRAI	JP 1981-210369		19811225		

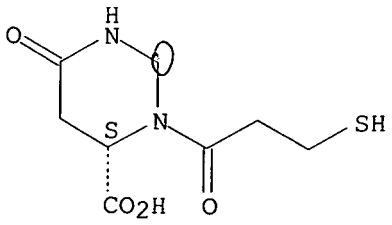
OS CASREACT 99:194996
AB Hexahydropyrimidines I (R = H, Me; R1 = H, Ac, Bz), useful as antihypertensives (no data), were prepared by acylating hexahydro-6-oxopyrimidine-4S-carboxylic acid (II). Thus, 4.9 g II dissolved in aqueous NaHCO3 and acylated with 6.1 g 3-acetylthio-2S-methylpropanoyl chloride gave 3 g I (R = 2S-Me, R1 = Ac), which was converted to its dicyclohexylamine salt. Both were hydrolyzed with 14% NH4OH at room temperature to give I (R = 2S-Me,R1 = H) and its dicyclohexylamine salt, resp.
IT 87746-26-7P 87746-27-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 87746-26-7 CAPLUS
CN 4-Pyrimidinecarboxylic acid, 3-[3-(benzoylthio)-1-oxopropyl]hexahydro-6-oxo-, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 87746-27-8 CAPLUS
CN 4-Pyrimidinecarboxylic acid, hexahydro-3-(3-mercapto-1-oxopropyl)-6-oxo-, (S)- (9CI) (CA INDEX NAME)

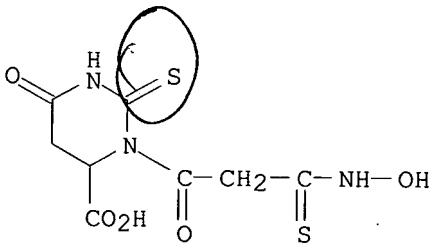
Absolute stereochemistry.



L6 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1983:107316 CAPLUS
DN 98:107316
TI Orotic acid derivatives and therapeutic compositions containing them
IN Corbiere, Jerome
PA Fr.
SO Fr. Demande, 22 pp.
CODEN: FRXXBL
DT Patent
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2505333	A1	19821112	FR 1981-9057	19810507
	FR 2505333	B3	19840803		
	WO 8401385	A1	19840412	WO 1982-FR159	19820928
	W: JP, US				
	RW: BE, CH, DE, FR, GB, LU, NL				
	EP 119995	A1	19841003	EP 1982-902820	19820928
	R: BE, CH, DE, FR, GB, LI, LU, NL				
PRAI	FR 1981-9057		19810507		
	WO 1982-FR159	A	19820928		

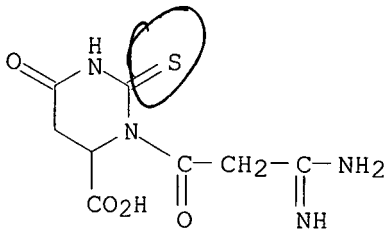
OS CASREACT 98:107316; MARPAT 98:107316
AB Thiohydroxamic acids I (R, R2, R4 = H, alkyl; R1 = H, CO2CH2Ph; R3 = H, alkyl, aryl, aralkyl; X = O, S) were prepared Thus II (R1 = R4 = R5 = H) was esterified and benzyloxycarbonylated to give II (R1 = CO2CH2Ph, R4 = Me, R5 = H) which was treated with HO2CCHMeCN to give II (R1 = CO2CH2Ph, R4 = Me, R5 = COCHMeCM, III). III was oxidized to N-oxide and treated with H2S to give I (R = R3 = H, R1 = CO2CH2Ph, R2 = R4 = Me, X =O) which was deblocked in 2 steps to give I (R = R1 = R3 = R4 = H, R2 = Me, X = O). I gave 75% inhibition of angiotensin-induced vasoconstriction in rats at 0.5-1.5 mg.
IT 84845-22-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 84845-22-7 CAPLUS
CN 4-Pyrimidinecarboxylic acid, hexahydro-3-[3-(hydroxyamino)-1-oxo-3-thioxopropyl]-6-oxo-2-thioxo- (9CI) (CA INDEX NAME)



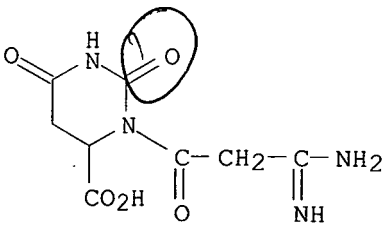
L6 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1983:72129 CAPLUS
DN 98:72129
TI Acyl derivatives of dihydroorotic acid and their use as medicaments
IN Corbiere, Jerome
PA Fr.
SO Fr. Demande, 14 pp.
CODEN: FRXXBL
DT Patent
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2501205	A1	19820910	FR 1981-4589	19810309
	FR 2501205	B3	19840106		
PRAI	FR 1981-4589		19810309		

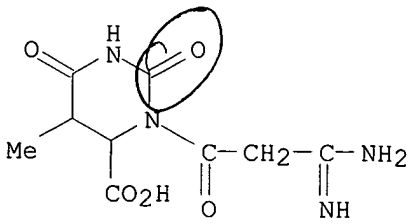
OS CASREACT 98:72129; MARPAT 98:72129
AB Orotic acid derivs. I (R = H, CHPh2, CPh3; Z = O, S; R1 = H, alkyl; R2 = alkyl), useful as antihypertensives (no data, formulations are given), were prepared II (R = CPh3, R3 = cyano, R4 = Me) reacted with NH3, the II [R = CPh3, R3 = C(:NH)NH2, R4 = Me] obtained was converted to II [R = H, R3 = C(:NH)NH2, R4 = Me], and the latter was saponified to I (R = R2 = H, Z = O, R1 = Me).
IT 84591-04-8P 84591-05-9P 84591-06-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 84591-04-8 CAPLUS
CN 4-Pyrimidinecarboxylic acid, 3-(3-amino-3-imino-1-oxopropyl)hexahydro-6-oxo-2-thioxo- (9CI) (CA INDEX NAME)



RN 84591-05-9 CAPLUS
CN 4-Pyrimidinecarboxylic acid, 3-(3-amino-3-imino-1-oxopropyl)hexahydro-2,6-dioxo- (9CI) (CA INDEX NAME)



RN 84591-06-0 CAPLUS
CN 4-Pyrimidinecarboxylic acid, 3-(3-amino-3-imino-1-oxopropyl)hexahydro-5-methyl-2,6-dioxo- (9CI) (CA INDEX NAME)



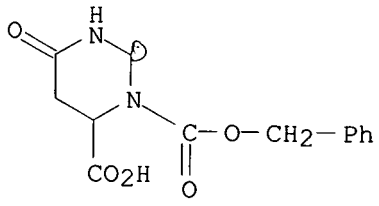
L6 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1979:23041 CAPLUS
DN 90:23041
TI Penicillin derivatives
IN Morita, Yoshimi; Komata, Kenzo; Oya, Junichi
PA Mitsubishi Chemical Industries Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 53073587	A	19780630	JP 1976-148191	19761209
PRAI	JP 1976-148191	A	19761209		

AB Acylation of ampicillin (I) by stirring QOH (R1 = CO2CH2Ph) (II) with Et3N and ClCO2Bu-iso 30 min at 0°, and then stirring with I and Et3N at -30° and 2 h at 0° gave 54% III-2H2O (R = Q, R1 = PhCH2O2C)(III). Deprotection of III by H2-Pd-BaCO3 gave 50% III (R = Q, R1 = H) (IV) (as K salt). The min. inhibitory concns. of III against Staphylococcus aureus and that of IV against Proteus vulgaris were 0.93 and >6.2 μg/mL, resp.

IT 68588-94-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation of ampicillin by)

RN 68588-94-3 CAPLUS
CN 1,6(2H)-Pyrimidinedicarboxylic acid, tetrahydro-4-oxo-, 1-(phenylmethyl) ester (9CI) (CA INDEX NAME)



L6 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1962:18537 CAPLUS
DN 56:18537
OREF 56:3559e-i,3560a-i,3561a
TI Synthesis of two peptides containing methylene-L-asparagine
AU Stammer, Charles H.
CS Merck Sharp & Dohme Research Labs., Rahway, NJ
SO Journal of Organic Chemistry (1961), 26, 2556-60
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA Unavailable
OS CASREACT 56:18537
AB -Finely powdered L-H2NCOCH2CH(NH2)CO2H.H2O (I) (100 g.) heated in 700 ml. H2O at 75° 1 hr. filtered, treated at 45° with 54 g. 37% aqueous HCHO, the mixture kept 20 min. before diluting with 2 ml. MeOH, kept 2 hrs. at 0°, the product washed with MeOH, and dried in vacuo at 50° yielded 59.5% material, m. 210-60°, [α]25D -63.5° (c 1.07, H2O), Rf 0.28, 0.35, 0.40 (solvent C, 20:5:8 MeCOEt-C5H5N-H2O, located with ninhydrin). The material (5 g.) recrystd. from 170 ml. H2O and 100 ml. MeOH at 28° gave 3.0 g. methylene-L-asparagine (II), m. 210-60° (decomposition), [α]25D -73.5° (c 2.04, H2O), Rf 0.50 (solvent C), λ 3.1, 5.95-6.2μ. I (30.0 g.) in 200 ml. N LiOH and 18 ml. 37% aqueous HCHO kept 48 hrs. at 20°, acidified with 13 ml. AcOH, slowly diluted with 500 ml. absolute alc., refrigerated 16 hrs., and the product washed with alc. and Et2O gave 53% material, [α]25D -62.5° (c 2.46, H2O), [α]25D -103.5° (c 7.25, H2O containing 1 equivalent NaOH), Rf 0.31, 0.44 (solvent C) (L-asparagine, Rf 0.30; L-aspartic acid, Rf 0.32). The material stirred 2 hrs. at 25° in 350 ml. H2O, the filtered solution diluted with 350 ml. H2O, refrigerated 16 hrs., and filtered gave 7.2 g. crystalline II. II (254 mg.) in 25.0 ml. 0.89N LiOH kept 24 hrs. at 25°, the solution (constant optical rotation, [α]25D -5.88°) adjusted to pH 6 with 2 ml. AcOH, lyophilized, and the residue crystallized from 11 ml. 4:7 H2O-alc. gave 173 mg. crystalline material, Rf 0.22 (solvent A, upper phase, 4:1:5 BuOH-AcOH-H2O), Rf 0.23, Rf 0.32 (solvent C). Dimedon (4 millimoles) in 75 ml. warm H2O and 2 millimoles II kept 16 hrs. at 25°, filtered from the dimedon-HCHO adduct (524 mg.), the filtrate lyophilized, the residue extracted with hot alc., the insol. portion taken up in hot H2O, diluted dropwise with alc., the crystalline precipitate washed with alc., and dried gave I. II (5.0 g.) in 50 ml. half-saturated aqueous KHCO3 stirred magnetically with 4.9 ml. PhCH2OCOCl 2.5 hrs. at 25°, the solution washed with Et2O, adjusted to pH 1.5 with concentrated HCl, the precipitated oil extracted into 150 ml. EtOAc, the dried extract evaporated to 100 ml., and the product washed with EtOAc yielded 59% carbobenzyloxymethylene-L-asparagine (III), m. 135-8°, [α]25D -30° (c 1.55, H2O). III (2.78 g.) in 25.0 ml. 2.13N LiOH kept 10 days at 25°, the solution (constant optical rotation, [α]25D-0.28°) acidified with 3 ml. AcOH,lyophilized, the residue extracted with hot alc., and the insol. solid dried gave material, Rf 0.33 (solvent C, DL-aspartic acid, 0.36). (C6H11N:)2C (IV) (30 millimoles) and 30 millimoles p-HOC6H4CH2CH(NH2)CO2Me in 50 ml. dry HCONMe2 stirred 1 hr. at 0° (ice bath) with addition of 30 millimoles III in 30 ml. dry HCONMe2, the mixture stirred 16 hrs. at 25°, filtered at 0° from 4.55 g. (C6H11NH)CO (V), the filtrate evaporated, the residue taken up in 200 ml. EtOAc, the solution washed with N HCl and saturated aqueous KHCO3, the dried organic phase evaporated, and the residue crystallized from EtOAc yielded 45.5% ester,

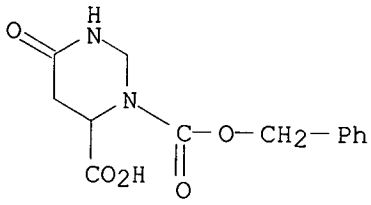
m. 163-5°, [α]24D -45.7° (c 1.05, MeOH), recrystd. from 1:3 Me2CHOH-H2O to give carbobenzyloxymethylene-L-asparaginyl-L-tyrosine Me ester (VI), m. 163-5°, [α]25D -48° (c 1.0, MeOH), Rf 1.0 (solvent C, visualized with diazotized p-H2NC6H4SO3H), 0.89 (solvent C, diazotized p-H2NC6H4SO3H). Under the same conditions H2NCOCH2CH(CO2H)NHOCOCH2Ph (VII) was coupled with tyrosine Me ester to yield 27% carbobenzyloxy-L-asparaginyl-L-tyrosine Me ester, m. 197-9°, [α]25D 1.96° (c 1.02, MeOH). Conversion of VI to the free L-asparaginyl-L-tyrosine failed. The ester group was saponified in 0.5N NaOH. VI (0.50 millimole) kept 2 hrs. at 25° in 2.0 ml. 0.5N NaOH (ring chromatographic procedures showed that saponification was complete in 15 min. and that the methylene-L-asparaginyl ring was not destroyed in 2 hrs.), the mixture acidified with 1.0 ml. 1.0N HCl, the separated oil extracted into EtOAc, the residue on evaporation of the extract (228 mg.) taken up in hot Me2CHOH, the solution diluted with H2O, and kept 3 hrs. at 25° prior to refrigeration yielded 50% material, washed with 1:4 Me2CHOH-H2O and dried to give carbobenzyloxymethylene-Lasparaginyl-L-tyrosine (VIII), m. 119-22° (Me2CHOHH2O), [α]25D -25.5° (c 1.06, C5H5N), Rf 0.88 (solvent C), 0.31 (solvent B, 1:1 BuOH-1.5N NH4OH, upper phase). Reductive removal of the PhCH2OCO group from VIII gave a mixture of products, which reacted with ninhydrin and diazotized p-H2NC6H4SO3H. Treatment of the mixture with aqueous dimedon gave only 47% dimedon-HCHO adduct and a new mixture of peptides. The complexity of the mixture made further investigation impractical. A 2nd methylene-L-asparaginyl peptide was obtained by reaction of the mixed anhydride of III with the Na salt of nitro-L-arginine (IX). III (80 millimoles) in 300 ml. 1:1 tetrahydrofuran-dioxane stirred mechanically (ice-MeOH bath) with successive addition of 80 millimoles NEt3 and 80 millimoles ClCO2CH2CHMe2, the mixture stirred 20 min. before addition of 100 millimoles IX and 110 millimoles NEt3 in 300 ml. ice-cold H2O in 5 min., the mixture stirred 4 hrs. with warming to 25°, stripped of organic solvents, acidified with concentrated HCl, the mixture extracted into 1:1 BuOH-EtOAc, and the residue on evaporation triturated with hot EtOAc gave 26.4 g. product, Rf 0.23, 0.35, 0.49 (solvent B, ultraviolet visualization). The product (10 g.) in 75 ml. hot 1:1 Et2O H2O filtered and the solution kept 1 week at 25° gave 4.5 g. crystalline material, m. 199202°, recrystd. from 3:7 alc.-H2O to give carbobenzyloxymethylene-L-asparaginylnitro-L-arginine (X), m. 202-4°, Rf 0.82, 0.70, and 0.20 (in solvents C, A, and B, resp.), [α]25D -27.5° (c 2.18, 0.1N NaOH). X (2.5 g.) in 60 ml. 5:1 MeOH-H2O hydrogenated 16 hrs. at 25°/40 lb./sq. in. over 2.5 g. 10% Pd-C, the filtered solution evaporated, the residue taken up in 50 ml. H2O, the solution lyophilized, and the residue (1.30 g.) crystallized from 12 ml. hot MeOH yielded 72% methylene-L-asparaginyl-L-arginine-MeOH (XI), m. 160-5° (decomposition), Rf 0.29 (solvent C). XI (250 mg.) in 1 ml. H2O diluted with 1 ml. Me2CHOH, seeded, and diluted with 3 ml. MeOH gave 177 mg. crystalline material, m. 163-5°, [α]23D -31° (c 1.0, 0.1N HCl), retaining MeOH after drying 2 hrs. at 78°/0.1 mm. over Drierite. XI treated with aqueous dimedon gave a peptide product showing 3 ninhydrin-pos. components. Attempts to purify the mixture failed. To investigate the possibility of carbamido group participation in the coupling reaction, VII was treated with IV in the absence of tyrosine Me ester. VII (10 millimoles) in 27 ml. dry HCONMe2 added in 15 min. with magnetic stirring to 10 millimoles IV in 12 ml. ice-cold HCONMe2, the mixture kept 20 hrs. at 25° with precipitation of solid V, the mixture treated with 10 millimoles L-tyrosine Me ester in 10 ml. warm HCONMe2, kept 4 hrs. at 25°, filtered from 2.07 g. V, the filtrate evaporated, the residue

taken up in 100 ml. EtOAc, the solution washed with 50 ml. half-saturated aqueous KHCO3 with removal of 2.0 g. acidic products, the solution freed from 0.8 g. ester by washing with 50 ml. 2.5N HCl, the washed solution evaporated, and the neutral material (0.5 g., Rf 0.95 in solvent B) taken up in MeOH gave crystalline carbobenzyloxy-L-asparaginyl-L-tyrosine Me ester, m. 200-12°. The acidic product crystallized from 25 ml. ClCH2CH2Cl yielded 42% material, m. 126-8°, recrystd. from 60 ml. (ClCH2)2 to give 880 mg. carbobenzyloxy-cyano-L-alanine, m. 126-8°, [α]2D1 -19° (c 1.26, MeOH), λ 4.43 μ. The product may be converted readily with HBr-AcOH to asparagine and may have utility in asparaginyl peptide synthesis.

IT 68588-94-3P, 1,6(2H)-Pyrimidinedicarboxylic acid, tetrahydro-4-oxo-, 1-benzyl ester
RL: PREP (Preparation)
(preparation of)

RN 68588-94-3 CAPLUS

CN 1,6(2H)-Pyrimidinedicarboxylic acid, tetrahydro-4-oxo-, 1-(phenylmethyl) ester (9CI) (CA INDEX NAME)



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L5             15 S L3 SSS FUL

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L7              1 L5

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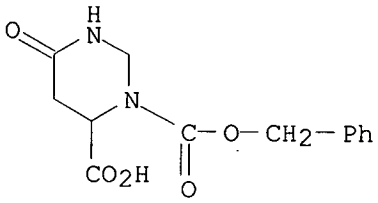
L7 ANSWER 1 OF 1 CAOLD COPYRIGHT 2007 ACS on STN
AN CA56:3559e CAOLD
TI hydrolysis of peptide bonds
AU Niemann, Albert
TI synthesis of two peptides containing methylene-L-asparagine
AU Stammer, Charles H.
IT 68588-94-3
RN 68588-94-3 CAOLD
CN 1,6(2H)-Pyrimidinedicarboxylic acid, tetrahydro-4-oxo-, 1-(phenylmethyl) ester (9CI) (CA INDEX NAME)



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